

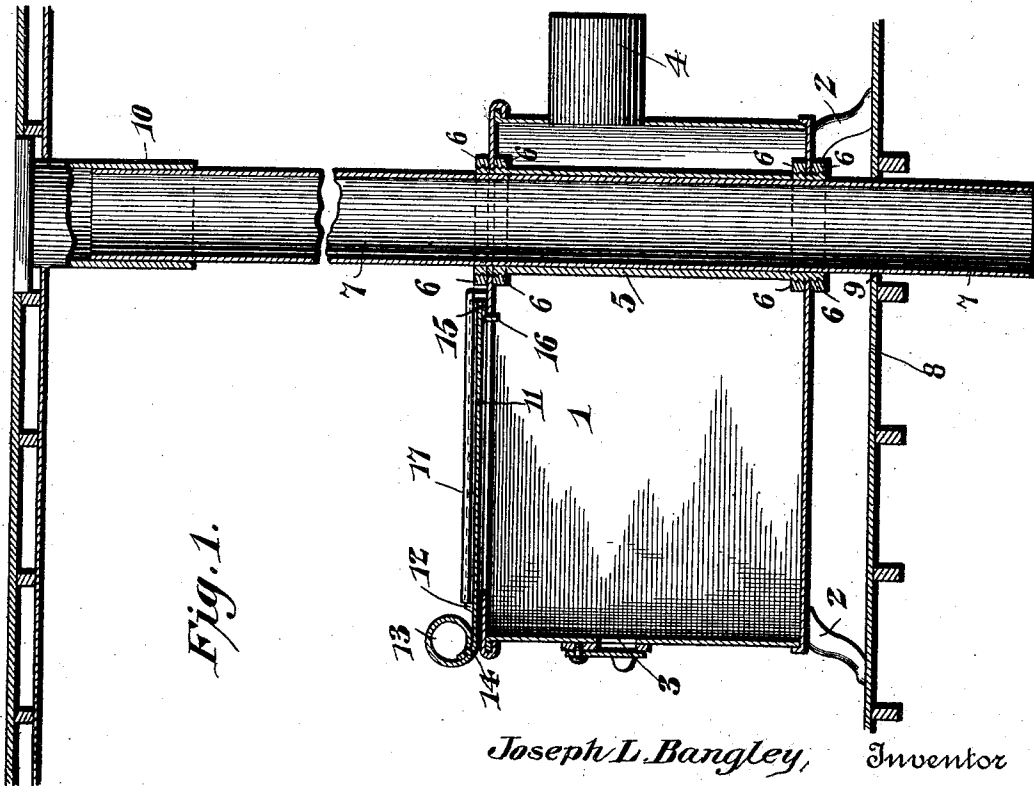
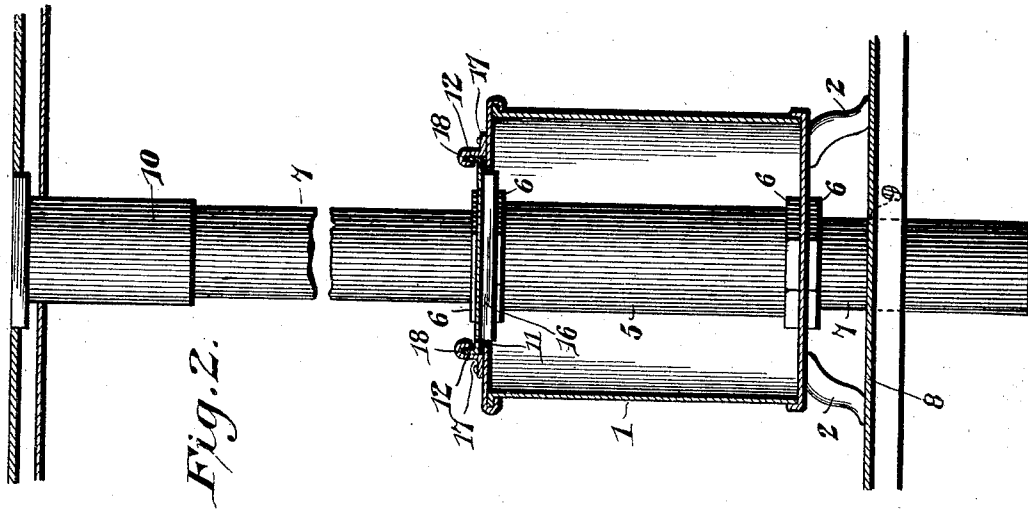
No. 695,872.

Patented Mar. 18, 1902.

J. L. BANGLEY.  
HEATING STOVE.

(Application filed Sept. 11, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 695,872, dated March 18, 1902.

Application filed September 11, 1901. Serial No. 75,087. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH LEWIS BANGLEY, a citizen of the United States, residing at Suffolk, in the county of Nansemond and State of Virginia, have invented a new and useful Heating-Stove, of which the following is a specification.

This invention relates to stoves, and is particularly designed to provide improvements in wood-burning stoves wherein air is heated and given off in a simple and effective manner; and it is furthermore designed to provide for adjusting the air-heating means so as to accommodate the same to the varying conditions of the air surrounding the stove.

A further object is to arrange the air-heating means so as to receive the full benefit of the fire and at the same time to obviate obstructing the fuel-opening and fire-box of the stove, whereby the latter is particularly adapted for burning wood in comparatively long sticks.

Another object is to provide a tight and durable connection between the air-heating means and the top and bottom of the stove, so as not to interfere with the effective burning of the fuel and at the same time to facilitate the adjustment of the air-heating device.

Final objects reside in the provision of an improved closure for the fuel-opening, said closure being constructed and mounted for convenience in operation and also to stiffen and strengthen the same and to insure a tight connection between the closure and the top of the stove when the former is in its closed position.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a central longitudinal sectional view of a heating-stove constructed and arranged in accordance with

the present invention. Fig. 2 is a transverse sectional view thereof, taken on the line 2 2 of Fig. 1.

Like characters of reference designate corresponding parts in both figures of the drawings.

Referring to the accompanying drawings, it will be seen that the stove has a substantially rectangular body 1, which is preferably made of sheet metal and is supported by means of any ordinary or preferred form of legs 2, so as to space the bottom of the stove at a suitable distance above the floor. In the front of the stove there is provided a suitable damper-controlled draft-opening 3, and connected to the upper portion of the rear end of the stove is a smoke-pipe 4.

In the extreme rear end of the stove and situated vertically therein and substantially midway between the opposite sides thereof there is provided a heating-drum 5, which has its opposite ends externally screw-threaded and projected through the top and bottom of the stove. The upper end of the drum is connected to the top of the stove by means of a pair of nuts 6, which are applied to the screw-threaded terminal of the drum and tightly clamped against the opposite sides of the top of the stove, thereby to form a tight and durable connection therewith. The opposite end of the drum is connected to the bottom of the stove in the same manner as described for the upper end of the drum, it of course being understood that the opposite ends of the drum project but slightly—that is to say, just enough to permit of the application of the external nuts. Within this open-ended heating-drum there is provided a pipe 7, which has a tight fit therein and is capable of endwise adjustment, the frictional contact between the pipe and the drum being sufficient to hold the former in any adjusted position. The lower end of the adjustable air-pipe is open and also designed to communicate with a source of fresh cool air, and therefore may terminate short of the floor 8, upon which the stove rests, or it may project through a suitable opening 9, formed in the floor, in order that the inlet end of the pipe may be projected through the floor for communication with a source of air cooler than that which may be

obtained in the room containing the stove—  
as, for instance, the pipe may be projected  
into a cellar. It is important that the air  
tube or pipe be of such a length as to be pro-  
5 jected through the floor, for the reason that  
when the air of a room becomes heated the  
circulation through the pipe is comparatively  
poor, and thus it is necessary to have the pipe  
constantly in communication with a source of  
10 comparatively cool air.

The advantage of employing a single end-  
wise-shiftable pipe projected both below and  
above the stove is to afford convenient ac-  
cess to the pipe for adjustment, as it may  
15 be readily taken hold of above the stove, and  
therefore it is not necessary to stoop down  
and reach beneath the stove to adjust the pipe.

It will of course be understood that the pur-  
pose of the air-pipe is to convey the heated  
20 air to rooms other than that in which the stove  
is placed, and therefore it is designed to have  
the upper end of the pipe slidably received  
within a pipe-section 10, fixed to the ceiling  
and piercing the same for connection with a  
25 register, (not shown,) but commonly employed  
for the distribution of heat from a heating-  
stove. Besides being useful to thrust the  
pipe downwardly through an opening in the  
floor it is also useful to adjust the lower open  
30 end of the pipe vertically with respect to the  
floor, so as to adapt the pipe to the air con-  
ditions of the room, especially drafts, and there-  
by to secure an effective updraft through the  
pipe.

35 The fuel-opening is formed in the top of  
the stove and is comparatively large, so as to  
readily receive long sticks of wood, as this is  
the character of fuel for which the present  
stove is designed. The closure for this open-  
40 ing is formed from a single plate or sheet of  
metal 11, which lies upon the top of the stove,  
is slidable in an endwise direction, and is pro-  
vided with opposite upstanding longitudinal  
integral flanges 12, the outer end of the plate  
45 or sheet being reduced and rolled over upon  
the top thereof in a coil 13, so as to form a  
handle, the extreme end of the coil being se-  
cured to the adjacent body portion of the  
plate by means of a rivet or other suitable fas-  
50 tening 14. The inner end of the closure-plate  
is folded upon the under side thereof, as in-  
dicated at 15, so as to stiffen the inner end of  
the closure, and the free extremity of this  
folded portion is bent downwardly to form a  
55 stop-flange 16 for engagement with the in-  
ner end of the fuel-opening, and thereby to  
limit the inward movement of the closure, the  
folded inner end portion of the plate being  
adapted to overlap the inner end of the open-  
60 ing, and thereby support the intermediate  
edge portion. It will of course be under-  
stood that the opposite ends of the stop-flange  
16 are cut away, so as to permit of said flange  
entering the fuel-opening. For guiding the  
65 closure-plate there is provided a pair of guide-  
ways, each of which is formed from a single  
sheet of metal 17, which is riveted or other-

wise secured to the top of the stove and par-  
allel with the adjacent edge of the fuel-open-  
ing, the inner edge of the plate being bent up-  
wardly and then downwardly, so as to form  
70 an inverted substantially U-shaped groove or  
guideway 18 for the slidable reception of the  
respective upstanding flanges 12 of the clo-  
sure-plate, whereby the latter is capable of  
75 endwise movement and is held against dis-  
placement and looseness.

From the foregoing description it will be  
noted that the air-heating device is located at  
the rear extremity of the stove, and the inter-  
80 rior of the latter is otherwise unobstructed,  
and therefore the heating device lies wholly  
within the fire-box of the stove and is there-  
by subjected to direct contact with the flames,  
whereby the air contained in the heating de-  
85 vice is quickly and effectively heated and is  
not located remote from the fire. Further-  
more, by locating the heating device at the  
extreme rear of the stove the top of the latter  
is otherwise unobstructed, whereby it is pos-  
90 sible to provide a comparatively large fuel-  
opening, so as to facilitate the introduction  
of large sticks of wood.

Having thus described my invention, what  
I claim as new, and desire to secure by Letters  
95 Patent, is—

1. A heating-stove, having a heating-drum  
provided with an exit-opening in communica-  
tion with the air surrounding the stove, and  
an endwise-adjustable inlet-pipe communi-  
100 cating with the interior of the drum and pierc-  
ing the bottom of the stove, the lower end of  
the inlet-pipe being normally in communica-  
tion with the air surrounding the stove and  
adjustable vertically to accommodate the in-  
105 let end of the pipe to the conditions of said air.

2. A heating-stove, having an upright air-  
heating pipe piercing the top and bottom of  
the stove, the lower end of the pipe being  
normally in communication with the air sur-  
110 rounding the stove, and the entire pipe also  
being endwise shiftable to accommodate the  
same to the conditions of the said air.

3. A heating-stove, having an open-ended  
air-heating drum fixed to and piercing oppo-  
115 site sides of the stove, and an open-ended end-  
wise-adjustable pipe fitted within the drum.

4. A heating-stove, having an open-ended  
air-heating drum fixed to and piercing oppo-  
120 site sides of the stove, and an endwise-ad-  
justable air-pipe frictionally fitting the inner  
walls of the drum, the frictional engagement  
between the drum and the pipe forming means  
to hold the latter at any endwise adjustment.

5. A heating-stove, having an open-ended  
125 air-heating drum piercing opposite sides of  
the stove and projected outwardly beyond  
the same, the opposite ends of the drum be-  
ing screw-threaded, inner and outer nuts ap-  
plied to each end of the drum and snugly  
130 clamping the adjacent side of the stove be-  
tween the same, and an endwise-adjustable  
air-pipe mounted within the drum.

6. A heating-stove, having a smoke-pipe

connected at its rear end, an open-ended upright air-heating drum piercing the top and bottom of the stove at the rear ends thereof, and an endwise-adjustable air-pipe fitted within the drum and projected both above and below the stove, the lower end of the pipe being constructed to form an inlet, and the upper end of the pipe being constructed to discharge the heated air, the top of the stove being provided with a fuel-opening located in front of the drum.

7. A stove having a fuel-opening, external guideways provided at opposite sides of the fuel-opening, and an endwise-slidable closure having upstanding flanges slidably engaging the guideways, and having its inner end folded upon its under side to stiffen the closure and then bent downwardly to form a stop-flange for engagement with the inner edge of the fuel-opening, the opposite ends of the flange being cut away to permit of the flange

working between the opposite sides of the fuel-opening, and the outer end of the closure being rolled over upon the upper side thereof to form a handle, the free portion of the roll being secured to the closure.

8. The combination of a heating-stove having alined openings at the top and bottom thereof, an open-ended endwise-shiftable pipe fitted in said openings and projected above and below the stove, and a pipe-section to telescopically engage the upper end of the shiftable pipe and capable of being connected to the ceiling of a room so as to form a continuation of the shiftable pipe.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH LEWIS BANGLEY.

Witnesses:

C. A. NEALE,  
F. E. HARRISON.